

*Before the*  
**FEDERAL COMMUNICATIONS COMMISSION**  
**Washington, D.C. 20554**

In the Matter of	)	
	)	
Implementation of Section 304 of the	)	CS Docket No. 97-80
Telecommunications Act of 1996	)	
	)	
Commercial Availability of Navigation	)	
Devices	)	
	)	
Compatibility Between Cable Systems	)	PP Docket No. 00-67
and Consumer Electronics Equipment	)	

**REPLY COMMENTS OF TIVO INC.**

TiVo Inc. (“TiVo”) submits these reply comments in response to the Federal Communications Commission’s (the “FCC’s” or “Commission’s”) Second Further Notice of Proposed Rulemaking in the above-captioned matter.<sup>1</sup>

**I. DISCUSSION**

**A. Cable Labs Should Not Have Authority Over the Certification of New Content Protection and Device Interface Technologies.**

TiVo agrees with the comments of Public Knowledge and others that the approval of new connectors and protection technologies for use with Unidirectional Digital Cable Products (“UDCPs”) should not be left to CableLabs<sup>2</sup> – any more than the approval of “Table A” technologies should be left to the MPAA in the Broadcast Flag context.

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<sup>1</sup> Second Report and Order and Second Further Notice of Proposed Rulemaking, *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices, and Compatibility Between Cable Systems and Consumer Electronics Equipment*, CS Docket No. 97-80 and PP Docket No. 00-67, FCC 03-225, rel. Oct. 9, 2003 (“Plug & Play Order”).

<sup>2</sup> Comments of Public Knowledge and Consumers Union (collectively, “Public Knowledge”) at 8.

CableLabs is a private research entity funded by the cable industry. It is not an independent, inter-industry, standards-setting body. Putting decisions about innovation in the hands of the representative of one of the affected industries is troubling, as it puts CableLabs in a hopelessly conflicted position. While TiVo has enormous respect for the work CableLabs has performed on behalf of the cable industry, an entity funded entirely by one industry ultimately cannot be objective. Indeed, as the IT Industry Commenters highlight, in a home-networked, broadband world, the technology at issue will be used in multi-purpose devices that perform numerous other valuable functions unrelated to the display or distribution of cable content.<sup>3</sup> Technologies should not be excluded from use in digital cable devices, and their benefits denied to consumers, by an entity beholden to one industry. Rather, TiVo supports a scheme whereby the Commission would adopt rules and procedures that specify objective, functional criteria. Device makers could then self-certify – either to the FCC or to an independent entity approved by the Commission – that an output or content protection technology satisfies those criteria.<sup>4</sup>

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<sup>3</sup> Comments of Microsoft Corporation, Hewlett-Packard Corporation, Dell, Inc., and Apple Computer (collectively, the “IT Industry Commenters”) at 10-12.

<sup>4</sup> Should the Commission ultimately decide to permit CableLabs to be the sole initial arbiter for approving new outputs and content protection technologies, TiVo agrees with the comments of Philips that it should be incumbent upon CableLabs to approve technology under the DFAST license if that same technology has been approved by the Commission for Broadcast Flag purposes. Comments of Philips Electronics North America Corporation (“Philips”) at 6.

1. The Dual Tuner Functionality Problem Highlights Conflicted Position of CableLabs.

The conflicted position of CableLabs is exemplified by the dual tuner problem.<sup>5</sup>

Cable set-top-box vendors currently are providing cable operators with dual tuner set-top-boxes. To effectively compete in the market against dual tuner integrated set-top-boxes, CE and IT manufacturers need to be able to provide consumers with dual tuner functionality, with no economic disadvantage versus MSO supplied set-tops. Deploying devices with two point of deployment (“POD”) slots, while helpful, would not alleviate this competitive imbalance because the cable operators’ integrated boxes (a) have a cost-advantage by not needing to incorporate any POD hardware, much less two PODs; and (b) MSO customers are not taxed with having to lease any PODs, much less two PODs.<sup>6</sup> More importantly, however, manufacturers cannot build devices with two PODs even if they wanted to because CableLabs does not have a “profile” for a set-top box with two POD slots.

CableLabs won’t create or qualify a profile unless instructed to do so by a major MSO. If a device is not qualified by CableLabs, it won’t “plug and play” on a cable system. Hence, cable operators will not need to worry about providing subscribers with multiple PODs because manufacturers will not be able to provide qualified dual POD set-top boxes to consumers. As this example shows, it is simply unwise to repose the authority for approving new technologies in the hands of an organization that is entirely

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<sup>5</sup> Dual tuners provide significant consumer functionality such as the ability to display picture-in-picture and the ability to record one program while watching another.

<sup>6</sup> Non-integrated set-top boxes presently require two PODs for dual tuner functionality because each POD decrypts only one television signal stream.

beholden to one of the major industry players. Allowing the cable industry to control new technologies through its relationship with CableLabs is just bad policy.

**2. The Commission Should Solve the Two-Tuner Problem by Requiring Cable Vendors to Provide Multi-Stream PODs by January 1, 2005.**

The better solution to the competitive imbalance regarding dual tuners, of course, is the multi-stream POD. A multi-stream POD would at least reduce the hardware costs and corresponding consumer tax to just one POD requirement instead of two. CableLabs has done its job by creating a specification for a multi-stream POD.<sup>7</sup> However, the manufacture of multi-stream PODs lies squarely in the hands of the existing cable vendor duopoly – Scientific Atlanta and Motorola. And there is NO incentive and NO deadline for Scientific Atlanta and Motorola to produce multi-stream PODs. Indeed, the existing cable vendor duopoly would be expected to forestall developing multi-stream PODs as long as possible to fend off any potential competition.

Although the FCC references the development of multi-stream PODs in the two-way negotiations,<sup>8</sup> there is no reason for delaying the benefits to consumers of multi-stream POD availability until completion of two-way negotiations – which could take many months, if not years, to complete. Multi-stream PODs have nothing to do with the two-way negotiations. The only way to jump-start the availability of multi-stream PODs is for MSOs to require Scientific Atlanta and Motorola to create them. The only way MSOs will require the creation of multi-stream PODs is for the FCC to require their

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<sup>7</sup> See OpenCable™ Multi-Stream CableCARD Interface Specification Issued September 5, 2003 <http://www.opencable.com/downloads/specs/OC-SP-MC-IF-I01-030905.pdf>

<sup>8</sup> Plug & Play Order at para. 20.

availability by a date certain. TiVo thus urges the FCC to set a deadline of January 1, 2005 for MSOs to provide multi-stream PODs to subscribers at their request for use with non-integrated navigation devices.<sup>9</sup>

### **3. CE and IT Manufacturers Require Objective, Functional Criteria to Innovate.**

Regardless of who actually approves new outputs and content protection technologies, manufacturers should be able to self-certify that the technology satisfies objective, functional criteria adopted by the Commission. The “functional criteria” approach suggested by the IT Industry Commenters suggests a sensible approach to defining objective criteria.<sup>10</sup> By contrast the “criteria” suggested by the MPAA are inappropriate and would not be in the public interest.<sup>11</sup>

Arguing, as the MPAA does, that technology is acceptable only “if it has been accepted in the relevant marketplace as a protection technology or it is just as effective as one that has” is circular and puts the decision in the hands of one interested constituency – the MPAA and its member companies. For criteria to be truly objective, a company needs to know that if they create something that does X, Y and Z, it will be acceptable for use in UDCPs. The MPAA’s proposed “criteria” does not provide such certainty. Without truly objective, functional criteria, innovators will be unable to invest their time

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<sup>9</sup> As January 1, 2005 is over 20 months after publication of the specification by CableLabs, this should be more than enough time for cable operators to make available multi-stream PODs to subscribers.

<sup>10</sup> Comments of IT Industry Commenters at 7-9.

<sup>11</sup> Comments of the Motion Picture Association of America, Inc. et al. (“MPAA”) at 2-3.

and effort to develop new technologies due to uncertainty as to whether they ultimately will be approved for use.

**B. The Commission Should Clarify That Device Makers Have Architectural Flexibility in Designing Unidirectional Digital Cable Products.**

TiVo agrees with the comments of the IT Industry Commenters that the Commission should clarify that device makers have flexibility in implementing the features required under Section 15.123(b) of the rules as long as the product ultimately delivered to the consumer contains all of the required functionality.<sup>12</sup> The Commission also should clarify that the rules allow device makers simply to show compliance with the requirements of Section 15.123(b), as opposed to compliance with a specific test suite. Architectural flexibility is essential to the creation of innovative UDCPs.

**C. The End Of Integrated Set-Top Box Sales Should Not Be Delayed.**

The Plug & Play Order delayed until July 1, 2006 the Congressional directive seeking to prevent MSOs from introducing new integrated set-top boxes into the market.<sup>13</sup> This mandate stems from the desire of Congress to ensure that consumers have a choice of cable television navigation devices from manufacturers, retailers, and other

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<sup>12</sup> See Comments of IT Industry Commenters at 5-12

<sup>13</sup> 47 C.F.R. Section 76.1204(a)(1).

vendors not affiliated with cable operators.<sup>14</sup> Congress's desire to promote true competition in the manufacturing and distribution of consumer devices should not be allowed to slip any further than July 1, 2006. The Commission has recognized that MSOs' continued ability to provide integrated equipment would interfere with the statutory mandate of commercial availability. As TiVo previously has explained, until MSOs are required to provide their own customers with POD-enabled boxes, they have little incentive to ensure that any manufacturer's POD-enabled boxes will function properly. Moreover, until MSOs are required to provide their own POD-enabled boxes, the component prices for POD hardware will continue to be borne entirely by CE and IT manufacturers. If MSOs do not need to include POD components in their set-top boxes, the duopoly of cable set-top box vendors can continue to supply the MSOs with cheaper boxes, giving the MSOs a price advantage vis-à-vis POD-enabled boxes sold at retail – in addition to the natural advantage of having MSOs lease boxes directly to consumers. Accordingly, if the Commission truly wants to provide consumers with more choice and create an evolution of the market for navigation devices so they become generally and competitively available through commercial retail outlets,<sup>15</sup> the Commission should not allow competition in the cable set-top box market to be forestalled beyond July 1, 2006.

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<sup>14</sup> 47 U.S.C. Section 549. Section 629 was adopted as part of the Telecommunications Act of 1996. Pub. L. No. 104-104, 110 Stat 56 (1996) ("1996 Act").

<sup>15</sup> Report and Order *In the Matter of Implementation of Section 304 of the Telecommunications Act of 1996, Commercial Availability of Navigation Devices*, CS Docket No. 97-80, , FCC 98-116, rel. Jun. 24, 1998 at para. 13.

## II. CONCLUSION

TiVo views the plug and play initiative as a potentially very significant step towards offering consumers additional choices with respect to cable television. The public interest demands, however, that the Commission ensure that objective, functional criteria are defined, by which manufacturers unaffiliated with cable operators can create competitive navigation devices. The Commission must not allow innovation to be throttled by an unfair, unworkable, or ambiguous approval process for new UDCP connectors and protection technologies. In addition, setting a January 1, 2005 deadline for multi-stream POD availability would go a long way towards creating a competitive environment, as will sticking to the July 1, 2006 deadline prohibiting MSOs from introducing new integrated set-top boxes into the market.

Respectfully submitted,

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